Instructions for Use
Scooter **Ethon**

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for the best years

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1. Preliminary remark

Dear user:

You have chosen a top quality scooter from Bischoff & Bischoff. We thank you for your trust in us.
The scooter has been designed so that it offers you many advantages and meets your requirements. The scooter can be adapted to your individual body dimensions due to manifold setting possibilities and optimum adaptability .
The scooter is designed solely for outdoor use.
Before operating your new scooter for the very first time, please read this manual carefully. This manual is a permanent and necessary part of the scooter. Please keep the instruction manual within reach and place it at the new user's disposal, if the scooter is transferred to another user. Repair work and adjustments require specific technical training and, therefore, may only be carried out by specialist retailers authorised by Bischoff & Bischoff.

1.1 Signs and symbols

Caution! Indicates information that is particularly relevant to safety. Follow the instructions for use.

Important! Indicates information that is particularly useful in the respective context.

2. Important safety information

2.1 General safety information

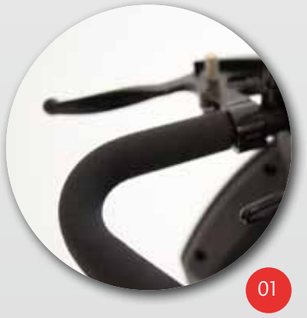
In order to avoid toppling and dangerous situations, you should practice safe handling of your new scooter on a flat and familiar surface. In such case, an assistant is recommended.
Prior to using the scooter, please check whether all parts attached have been fastened properly.
The first attempts at moving the scooter should take place on a level and manageable surface. Familiarise yourself intensively with the braking and accelerating behaviour of the scooter when moving straight ahead and turning corners.
Please note that redistribution of weight due to body movements or loading the scooter can increase the risk of tipping over to the side or backwards.
The scooter may not be misused for transporting several persons or loads. Observe the specific function of the wheelchair.
When adjusting or readjusting the scooter beware of getting trapped with parts of your body.
Never use your scooter while under the influence of alcohol or other substances that may influence your ability to react or your physical and mental receptiveness.
By all means, use ramps to avoid obstacles. Should it be necessary to lift the Ethon scooter to overcome an obstacle, lift it without occupants only. To lift the wheelchair, only take hold of firmly attached frame parts.
Avoid wheeling against obstacles (steps, kerbs) at full speed.
The control system must always be switched off when getting in and out.
Observe the road traffic regulations when on the road.

The lighting on the scooter must at all times be visible to other road users.
If possible, wear bright, noticeable clothes. You will then be seen better by other traffic participants.
Please note that padded parts can become hot in direct sunlight and lead to skin injury on contact. Therefore, cover these parts or protect the scooter from direct sunlight.

Please observe that the scooter may only be pushed on a horizontal surface by disconnecting the driving mechanisms. As a result, the electromechanical brake is put out of operation. Danger to life in case of non-observance!

2.2 Advice on EMC disturbances

Despite compliance with all the applicable EMC regulations and standards, it is possible that the scooter may be disrupted by other electrical devices (e.g. mobile phones, alarm systems in department stores) or that it may interrupt such devices. If you observe such behaviour, switch off either the external device or your scooter and move the scooter out of reach of the disturbance.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2.3 Braking

In order to be able to brake while being pushed with the drive disengaged, a locking brake is available (Fig. 1). To operate the brake, the brake lever on the steering column is operated.
Braking the scooter with the drive engaged is carried out by the automatic brake after releasing the control lever. If the drives are engaged, the scooter cannot be pushed or moved, as the motors brake automatically.

2.4 Safety in vehicles

Please note that the scooter may not be used as a seating accommodation in any vehicle. The user must transfer from the scooter to a vehicle seat.
The scooter must be secured against slipping by means of belt straps.

2.5 Participation in traffic

The scooter is designed for outdoor use.
Please observe that you participate in public traffic and must comply with road traffic regulations.
Do not endanger other participants through careless driving, particularly on footpaths

2.6 Purpose

The Ethon scooter is designed for both indoor and outdoor use for people with impaired mobility.
Thus, it is sufficiently compact and manoeuvrable for indoor use and also capable of covering medium-sized distances and overcoming small obstacles outdoors. It is classified as category B in accordance with DIN EN 12184. The maximum load is 160kg.

2.7 Indications

Inability to walk or severe walking disability as a result of
- paralysis,
- loss of limbs,
- meromelia/limb deformation,
- joint contractures,
- damage to joints (not on both arms),
- other ailments.

Use of an scooter is indicated, when the use of hand-operated wheelchairs is no longer possible due to the disability, but proper operation of an electric motor driven scooter is still possible.

2.8 Contraindications

The use of electric wheelchairs is not suited for persons
- with severe disturbances of equilibrium,
- with reduced or insufficient eyesight,
- with severe restrictions of the cognitive ability.

2.9 Declaration of conformity

As the manufacturer with sole responsibility, Bischoff & Bischoff declares that the Ethon scooter conforms to the specifications of directive 93/42/EEC.

3. Product and delivery overview

3.1 Inspection of delivery

All B&B products are subjected to a proper final in-house inspection and provided with the CE mark.
The scooter is delivered in a special cardboard box. Please keep the cardboard box, if possible, after having unpacked the wheelchair. It may serve for storing the scooter at a later time or returning the product.
Generally, the scooter is delivered and induction training provided by qualified medical supplies shops.
If delivered by rail or a forwarding agent, the product is to be checked with regard to transportation damage (cardboard box) at once in the presence of the shipper. If damaged, please contact our customer service immediately (phone: +49 72 48/92 09-2).
Please check the content with regard to completeness and sound condition. In case of irregularities or damage, please contact our customer service (phone: +49 72 48/92 09-2).

3.2 Scope of delivery

Upon receipt, immediately check the content for completeness. The content consists of:
- Packing box
- Scooter (ready for use incl. 2 batteries),
- Headrest
- Charger
- Tool kit
- Instructions for use

3.3 Overview

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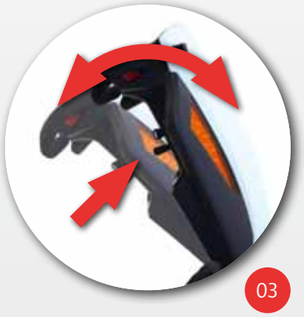
3.4 Initial settings

Prior to using the scooter for the very first time, it must be adapted to your size. Only that way longer effortless rides in a physiologically correct position are possible.
In the following, the initial settings of the scooter are described. Those settings should be made in cooperation with a medical supplies shop.

3.4.1 Steering column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The steering column of your scooter can be moved to allow you to set a comfortable driving position. You can make the setting directly from the driver's seat.

- Hold the handlebar with one hand and pull the lever towards you with the other hand.
- Move the steering column into the required position and release the lever.
- Positioning is continuously adjustable from 0° (straight) to 90° (flat for transport).
- After releasing the lever, the steering column is fixed in the position set.

3.4.2 Seat

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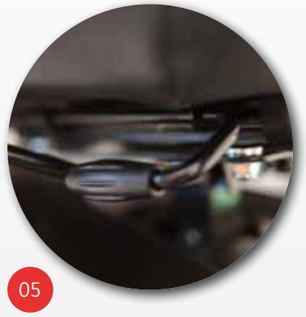
The seat is height-adjustable, is additionally adjustable forward and back and can be rotated to the side. While the seat height is normally only adjusted once, the other adjustments can be made at any time from the seat.

Rotating the seat:

- Pull the lever towards you (on the left below the seat). The seat can now be rotated in both directions.
- There is a fixed position every 90° where the seat engages.
- Release the lever and make sure that the seat is fixed again.
- If the seat is between the locking positions, it can be removed by lifting it.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Moving the seat:

- Pull the lever towards you (on the right below the seat). The seat can now be moved forwards and backwards.
- You can now set the seat in the desired position.
- Release the lever and make sure that the seat is fixed again in one of the nearest catch positions.

Seat height:

First you have to remove the seat and cover panels.

- To do so, rotate the seat by 90° and remove it.
- The cover panels are secured by 3 hand screws.
- Unscrew these and remove the cover panel.
- Unscrew the screws and position the seat post in the desired position inside the tube.
- Afterwards, tighten the screws in the nearest hole.
- Now put the seat back onto the bracket.
- Ensure that this locks back into position.

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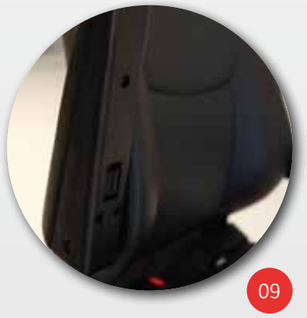
3.4.3 Seat back

The angle forwards or back of the seat back of your scooter can be adjusted. In addition, you have the possibility of limiting the adjustment range backwards.

Angle adjustment:

- Pull the lever (on the left of the seat) upwards. The seat back is now pushed forwards.
- Push the backrest into the desired position.
- Release the lever and make sure that the seat back is fixed again.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3.4.4 Armrests

The armrests can be swung back to make it easier to get on and off. In addition, the angle of the armrests can be adjusted.

Angle adjustment:

- Pull the lever (on the left of the seat) upwards. The seat back is now pushed forwards.

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3.4.5 Seat belt

The seat belt is secured on the side of the backrest.

- Adjust the belt length to match your requirements by positioning the buckle accordingly.
- Close the belt with the belt buckle.
- Open the belt by pressing the red button on the lock.

4. Using the scooter

Having adapted the scooter to your personal needs, make yourself familiar with the functions of the control unit.

4.1 Functional description of the control unit

The control unit is part of the steering column of your scooter. It includes an LED display and operating elements.

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The starter lock is on the front of the steering column.

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Hazard warning lights:
Use this button to switch on the hazard warning lights in an emergency when the scooter is unfit to drive. All four indicators will then blink and signal other traffic participants that your scooter is unfit to drive.

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Indicators (left/right):
Use this button to activate the left or right-hand indicator of your scooter in order to signal other traffic participants that you wish to change the travel direction to the left/right. By pressing the button again, you will deactivate the indicator.

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Mode/Set:
With the help of the MODE and SET buttons, you can make settings on the LCD screen.

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Parking light:
Pressing this button switches the parking light on. In this way, you can be easily seen even in darkness or at dawn and dusk.

Driving light:
Use this button to switch on the lights on your scooter after dusk or when passing through dark routes such as a tunnel. You will then be seen better by other traffic participants.

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Speed setting:
With this button you can set the driving stage, i.e. the maximum speed available. There are two speed settings: fast and slow.
The current speed setting is shown on the right of the LCD display.

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Horn:
The horn allows you to attract attention in difficult situations.

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LED status display:
The LED status display can be used to see whether particular functions such as indicators or driving light are activated.

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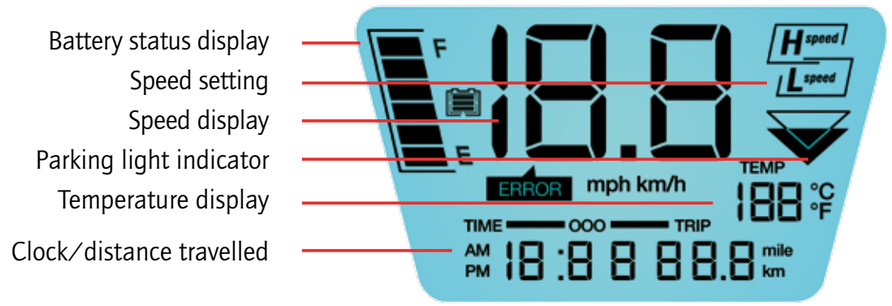
The LEDs in the status display have the following meanings (left to right): left indicator, hazard warning lights, service LED, parking light, driving light and right indicator. Illumination of the light indicates whether the respective function is active.



LCD screen:
You can read important information on the LCD screen concerning the charging state of the battery, the current speed, the distance travelled, the temperature and the speed setting selected.

Thermometer:
You can change the temperature display between degrees Celsius and Fahrenheit.
- Press the MODE button until the temperature is displayed.
- Hold MODE and SET pressed for 2 seconds to change to the settings menu.
- Press SET to change between Fahrenheit and Celsius.
- To save the settings, do not press any button for 20 seconds and then hold MODE and SET pressed for 2 seconds.

Clock:
You can display the current time.
- Press MODE until the time is displayed.
- To make changes, hold MODE and SET pressed for 2 seconds.
- Press SET to change the time and MODE to switch between minutes and hours.
- To save the settings, do not press any button for 20 seconds and then hold MODE and SET pressed for 2 seconds.

Total distance recorder:
You can display the total number of kilometres travelled.
- Press MODE to change to the menu for the total distance recorder.

Trip recorder:
You can display the number of kilometres travelled in the current trip.
- Press MODE to change to the menu for the trip recorder.
- Press SET for 3 sec to reset the display to “0.0”.

Speed display:
You can choose to display the current speed in km/h or miles/h.
- To make changes, hold MODE and SET pressed for 2 seconds.
- Press SET to switch between the units.
- To save the settings, do not press any button for 20 seconds and then hold MODE and SET pressed for 2 seconds.

Speed setting:
The current speed setting can be displayed on the LCD screen.

Parking light:
If the parking light is switched on, this is indicated with a symbol on the LCD screen.

Battery status display:
The charge condition can be seen in the battery status display. If all six bars are shown, the battery is fully charged. While you are using the scooter, the capacity of the battery is reduced and fewer bars are displayed. If only two bars are displayed, only short trips are still possible and the battery should be recharged. (See section „Charging process“).

4.2 Getting in and out

Ensure that the scooter is switched off before getting in.

- Put the steering column into the upright position as described above and swing the armrests to the rear on the side being used to get in from.
- A simpler method to take your seat is to rotate the seat 90° towards the side being used to get in from (see the section "Initial settings").
- Take your seat.
- Rotate the seat into the direction of travel or swing the armrests back forwards.

Caution!
Ensure that the seat is properly locked in position.

- Adjust the steering column so that you can reach all operating elements comfortably.
- To get out, reverse the sequence. However, remove the key first and thus ensure that no unwanted actions, such as moving off, take place.

4.3 Driving the scooter

You should take your first drive in an open, level space.

- Sit properly on your scooter. Set the speed as low as possible. When you are more comfortable using the scooter, you can increase the speed.
- You switch on your scooter by putting the key into the starter lock on the control console and rotating the key a quarter turn to the left.
- You switch off the scooter with a quarter turn of the key to the right. When leaving the scooter, always take out the key and never leave the scooter unattended with the key still in the lock.
- Please ensure that your thumb is not against the forward/reverse lever when you switch on the scooter. This would lead to an error message on your scooter. Switch it off and then back on to resolve the error.
- Pull the right speed selection lever back to move forwards. The more the lever is pulled back, the faster the scooter goes. The maximum speed reached will be the speed set on the speed selection lever, with a maximum of 6 km/h. Release the lever and stop carefully. Practice these two procedures until you are used to them.
- Steering is simple and works like a bicycle: you move the handlebar in the direction you want to go. Allow plenty of space to turn in a circle so that the rear wheels can follow the path of the front wheels and they do not hit objects.

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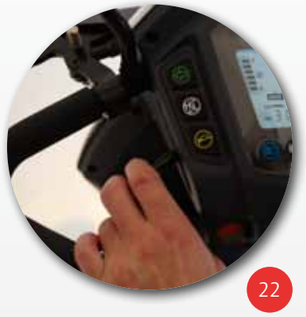
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- Care is required when moving backwards. Ensure that your speed is low before moving backwards. Please keep in mind that when moving backwards you need to steer in the opposite direction. Practice is necessary. Practice in an open, level space.

Please note that, for safety reasons, the speed when moving backwards is only half of the forward speed.

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- If you are driving in a sharp bend, turn the handlebar before accelerating. Always drive in a large arc around corners and obstacles and drive slowly and carefully.
- With the drive engaged, braking occurs automatically when the control lever is released. Do not push or move the scooter then, as the motors brake automatically.

4.4 Pushing mode

If you would like to push the scooter in certain situations, you must unlock the brakes. In freewheel mode, the scooter is easy to push.

Caution! As a result, the electromechanical brake is put out of operation.

- Pull the release lever in upward direction.
- A slight jerk tells you that the drive mechanisms are now unlocked.
- To engage simply pull the button upwards, it will click into place automatically.

Caution! Danger of life! The drive mechanisms may only be disconnected on an even surface.

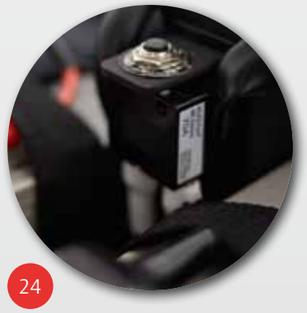
For safety reasons, the motor drive is blocked in the pushing mode.

4.4.1 Braking when being pushed

There is a manual locking brake on your scooter (as described in Section 2.3). This can be used to aid braking with the drive engaged, but serves as a locking brake with the drive disengaged.
To activate the locking brake, pull the brake lever towards you until the brake locks on. To unlock the brake, operate the lever again.

4.5 Overload switch

If the motor is overloaded, e.g. due to driving uphill for a long time, this automatically switches the motor off.
In this way, the motor and electrical components are conserved.
After switching off the motor in this way, please wait a few minutes before pressing the overload switch. (See Fig. 24)
The overload switch is on the seat bracket directly under the housing cover. (See Fig. 25)
The scooter should now work properly again. If it does not, contact your specialist retailer or the Bischoff & Bischoff customer service.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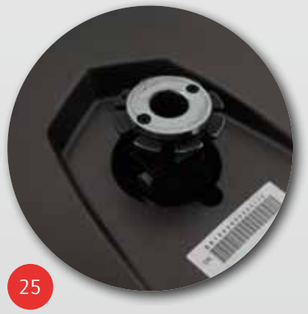
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5. Technical data

Measurements and weights

Max. load (kg):	160
Seat width (cm):	51
Seat depth (cm):	48
Seat height from the foot plate (cm):	450 mm, adjustable to 470, 490, 510 mm
Backrest height (cm):	75
Total length (cm):	147
Total width (cm):	71
Empty weight (kg):	153

Tyres

Drive wheels (mm):	13" x 5" (3.5 bar)
Steering wheels (mm):	13" x 5" (3.5 bar)

Electrics

Main fuse (A):	70
Battery:	2 x 12V / 80Ah
Charger:	24VDC / 4A
Motor:	DC 24 V / PEAK 700 W/4400rpm
Controller:	Dynamic Rhino110 A
Light and indicators:	conforms to the German Road Traffic Licensing Regulations

Driving characteristics

Speed (km/h):	15 (standard)
Climbing capability (°):	12
Height of obstacles (mm):	40
Range (km):	up to 64
Turning radius (cm):	194

Operating forces

Control lever:	approx. 2 N
Pushbuttons on the control panel:	approx. 5 N
Disconnecting the drive mechanisms:	> 60 N

Equipment

Framework:	powder-coated steel frame
Cover panels:	plastic
Seat with headrest:	imitation leather
Brake:	2 independent braking systems conforms to the German Road Traffic Licensing Regulations

6. Advice on product care
6.1 Cleaning and disinfection

Make sure your scooter is switched off before starting to clean it.

- The frame parts and coverings of the scooter can be wiped using a damp cloth. In case of heavy soiling, use a mild cleaning agent.
- To clean the wheels use a damp brush with plastic bristles (do not use a steel brush!).
- Use a damp cloth to remove dust and minor soiling off your seat, backrest and armrests. Do not use any aggressive cleaning agents, as they may affect the surface of the cloth. Cushions can be wiped with 40°C warm water and disinfected with a commercial disinfectant.
- Make sure that electric or electronic components do not come into contact with water!

Caution! Do not use a high-pressure or vapour cleaning device.

6.2. Check prior to use
6.2.1 Checking the brakes

Prior to each use, please check the operational reliability of the brakes.
Start up carefully and subsequently release the control lever. The scooter must come to a stop as usual.
While stationary, the mechanical brake must click into place audibly. Should you notice any unfamiliar braking behaviour, immediately inform your specialist retailer and do not use the scooter any longer.
The motor brake works correctly, when you cannot push the scooter if switched off. However, if it is nevertheless possible, the electromechanical brake is defective. In such case, you may no longer use the wheelchair. Please contact your specialist retailer at once.

6.2.2 Checking the lighting system, indicators and horn

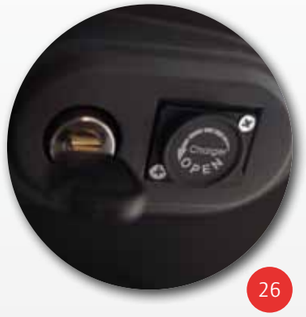
Prior to each use, please check the operational reliability of the lighting system, indicators and horn.
If, having operated the corresponding pushbutton, you do not notice any reaction of the unit just being checked, immediately inform your specialist retailer and do not use the scooter any longer.

6.2.3 Checking the tyres

Prior to each use, please check the sound condition of the tyres. Check the tyre pressures. They should be 3.5 bar.
Regularly check the profile depth of the tyres once a month. The profile depth should measure at least 1mm.
Defective or worn tyres must be replaced by a specialist retailer.

6.3 Batteries

Your scooter is equipped with maintenance-free batteries whose fluid level needs not be checked.
If the scooter is not used for a longer period of time, the batteries must be recharged every two months; otherwise, the batteries may be damaged by total discharge.
Prior to each use, check the charge status of the batteries by looking at the battery status display of your control unit. If only the red LEDs of the battery status display are illuminated, you should no longer take any long rides and connect the charger to the scooter at once.
We recommend to connect the charger to the scooter after each use.



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6.3.1 Charging process

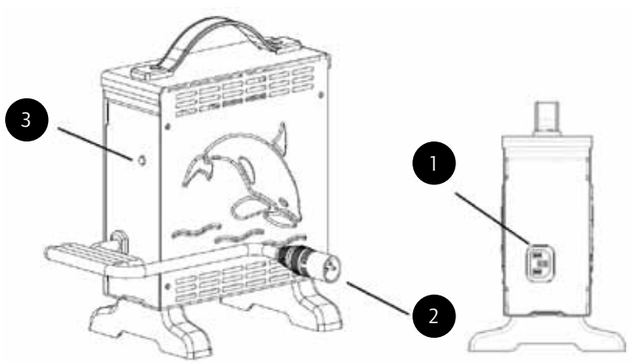
Only use approved chargers (type as specified by the technical data or supplied by a specialist B&B retailer) to charge the batteries. Also observe the instructions for use of the charger.

- Prior to switching on the charger, please check whether the power supply is 230V.
- Switch off the scooter first.
- Connect the charger to the wheelchair. The charge jack is on the side underneath the control unit.
- Plug the mains plug of the charger into the mains socket (230V) and switch on the charger.
- The charge indicator of the charger shows the status of the charging process (Fig. 27).

Green (blinking)	- charger is switched on
Orange	- charging is in process
Orange (blinking)	- charge preparation
Green & orange (blinking)	- charger is switched on
Green	- charging process complete
Red (blinking)	- fault

- Pull out the plug after the charging process is completed and disconnect the charger from the scooter.

1 mains connection
2 connection to battery
3 charging display



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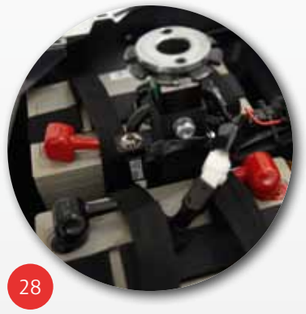
6.3.2 Exchanging the batteries

When work is performed on the batteries be extremely careful, avoid dealing with metallic tools, touching the battery terminals and observe the instructions given by the battery manufacturer.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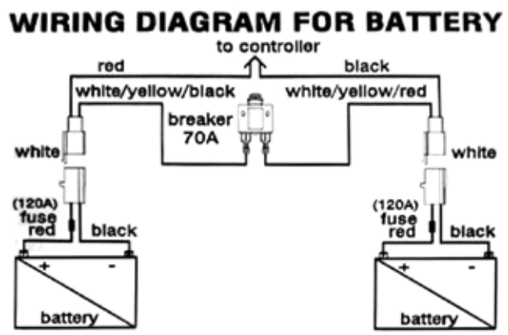
Caution! This work should only be carried out by a specialist. Danger of life!

Only use batteries that are approved for your scooter (see section Technical Data).
Make sure your scooter is switched off before starting to exchange the batteries. The batteries are under the seat of the scooter, protected by the housing cover panels.

- First remove the housing cover panels.
- If the batteries also need removing, open the hook-and-loop tape and carefully remove the batteries. The plug connections are coded mechanically and can only be connected one way. Do not use force.



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- Lift the new batteries into the designated space and connect the contacts. Observe the correct colour coding (red and black). Note the wiring diagram as necessary (Fig. 29).
- Secure the housing cover panels and the seat.

If the service life of the batteries has expired, i.e. sufficient charging no longer occurs, the batteries may not be disposed of in the household waste. When buying new batteries, old batteries will be taken back by a specialist retailer who will then dispose of them properly.

7. Service notes for specialist retailers

We recommend having your whole scooter inspected by a specialist retailer once a year.
In case of faults and defects on your wheelchair, return it to your specialist retailer immediately for repair.
On request, B&B will provide specialist retailers with required information, documents and wiring diagrams for repair and service. A training programme for specialist retailers is available.
In case of queries, please contact the B+B Customer Service at phone no. +49 7248/ 9209-2.

8. Disposal

If your scooter is not used any more and is to be disposed of, please contact your specialist retailer.

If you wish to dispose of the scooter yourself, please enquire at your local disposal companies about the applicable local regulations.

9. Transferring the scooter

When the scooter is transferred to another person, ensure that all technical documentation necessary for its safe use and the address of your specialist retailer are given to the new user.

The scooter must be checked in accordance with the servicing schedule and be in perfect working order.

10. Servicing

A servicing schedule can be made available to you by our customer service upon request.

11. Warranty

This warranty covers all defects in the scooter that are shown to be caused by material or production defects. In the case of complaints, please return the product together with the warranty certificate completely filled in.

Caution! Non-observance of the instruction manual as well as servicing not carried out properly and in particular technical modifications and additions (fittings) without approval of Bischoff & Bischoff result in expiration of both the warranty and the product liability in general.

We assume a warranty of 5 years on frame parts for our wheelchair, whereas we assume a warranty of 2 years on all other mounting parts.
The warranty period for wearing parts such as wheels, tyres, lamps and batteries is 6 months.

12. Personal notes

Warranty - certificate

Vehicle: Scooter
Model name: Ethon
Model number: 8150

Serial number:*
(to be entered by dealer)

Dealer:

Date and stamp

* See the frame for information stickers